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## **BARREN COUNTY**

### **(Barren County Water Service Area Map)**

- Estimated 1999 population of 37,200-- 88% on public water
- Estimated 2020 population of 42,200-- 89% on public water
- 740 miles of water lines, with plans for 145 additional miles
- Estimated funding needs for public water 2000-2005--\$5,220,000
- Estimated funding needs for public water 2006-2020--\$0

Barren County had an estimated population of 37,163 (15,459 households) in 1999, with a projected population of 42,155 (18,541 households) in the year 2020. 88% were served by public water systems. 5 of 6 households not on public water relied on private wells. There are some households that are not currently served by either water system. About 200 new households will be placed on public water through line extensions in 2000-2020.

To meet current and future needs of the county, projects have been selected and ranked by the Glasgow Water Company representatives, elected officials and the Barren River ADD's Board of Directors as being crucial to the future growth and development of Barren County.

Because of the potential increase in the amount of demanded water due to population growth and associated commercial and industrial activity, the Glasgow Water Company may need to increase their plant capacity to 7.0 or 8.0 mgd in the near future.

Any major residential and commercial growth in Barren County is expected to occur along Kentucky State Highway 90 between Glasgow and Cave City or along US 31-E. The Glasgow Water Company is well prepared for this potential growth, already having a well-established infrastructure network in these areas. Barren County may need to take steps to improve the infrastructure network in the western portion of the county if the proposed Southern Kentucky Industrial Air Park is constructed near the I-65/Cumberland Parkway interchange. This could result in a major increase in the amount of water needed in this portion of the county.

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# WATER SERVICE AREAS

## BARREN COUNTY

### Kentucky

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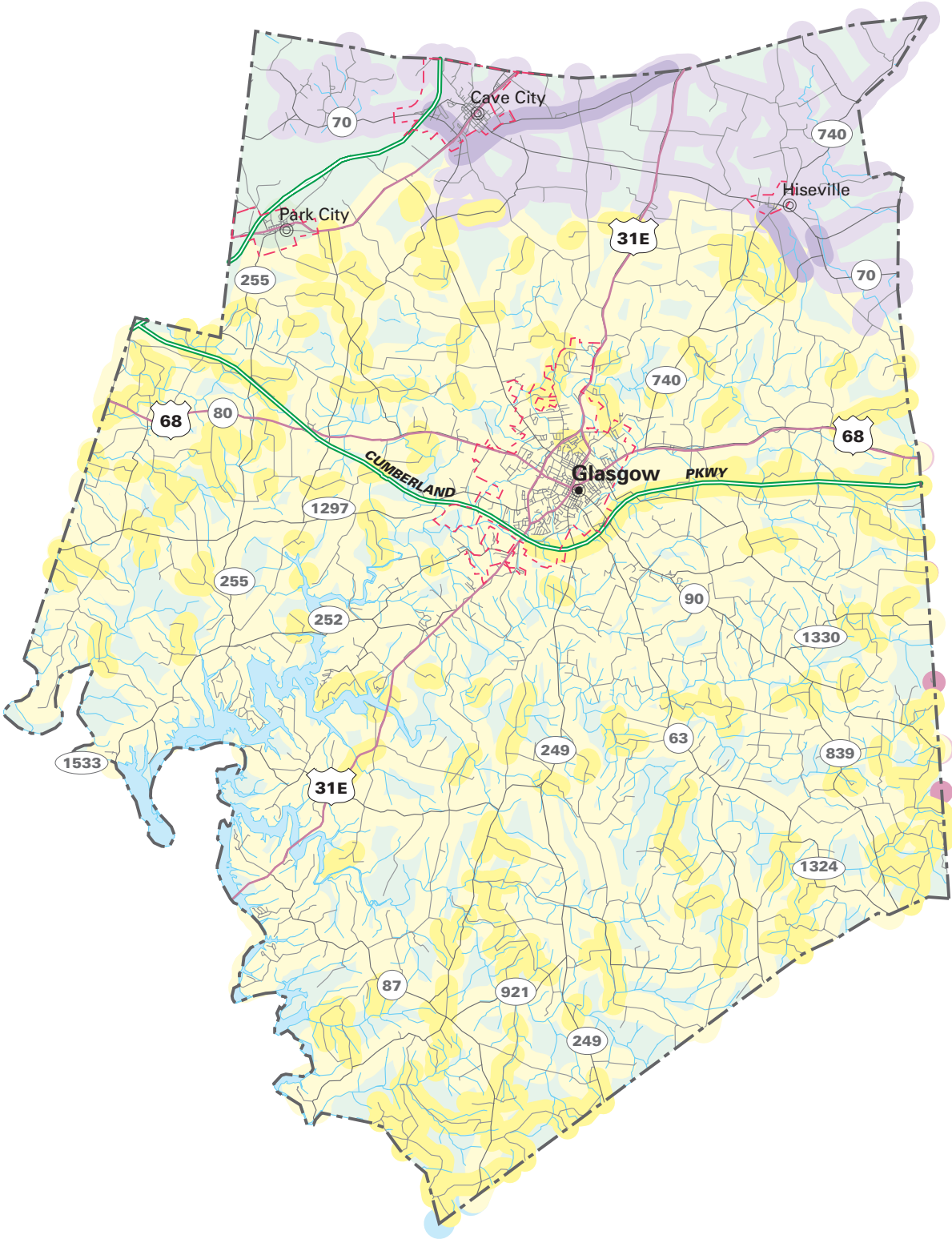
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WATER SERVICE STATUS BY OWNER		
EXISTING SERVICE AREA	PROPOSED SERVICE AREA	
		PARK CITY WATER WORKS
		GREEN RIVER VALLEY WATER DISTRICT
		GLASGOW WATER COMPANY
		FOUNTAIN RUN WATER DISTRICT
		EDMONTON WATER WORKS

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**Estimated Costs - Proposed Projects, 2000-2005**

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	In \$1000	in \$1000	in \$1000	in \$1000	in \$1000
BARREN								
GLASGOW WATER COMPANY	138.0	368	4,254					4,254
PARK CITY	6.1		966					966
BARREN COUNTY TOTAL	144.1	368	5,220					5,220

**PUBLIC WATER SYSTEMS**

Residents of Barren County are served by the Glasgow Water Company, the Green River Valley Water District, Park City Water Works, and the Cave City Water System. The Green River Valley Water District serves the northern portions of the county and the Glasgow Water Company serves the city of Glasgow and the remainder of the county.

**GLASGOW WATER COMPANY**

PWSID: ..... 0050929  
System Type:..... COMMUNITY  
Owner Type: ..... MUNICIPAL  
Surface Source:..... BARREN RIVER RESERVOIR  
Purchase Source: ..... GLASGOW WATER COMPANY  
Well Source:  
Sells Water to: ..... GLASGOW WATER COMPANY  
Treatment Plant Capacity (MGD):..... 6.00  
Percent Daily Average Production:..... 47.00  
Total Tank Storage Capacity (gallons): ..... 593,000.00  
Total Service Connections: ..... 13,140.00  
Number of Employees:..... 42.00  
Treatment Operator Class: .....3D  
Distribution Operator Class:.....4A  
Customer Rate for 1,000 Gallons:..... 2.26  
O/M costs 1997: .....Not available  
O/M costs per Service Connection: .....Not available  
Net Revenue 1997: .....Not available  
Total Water Produced 1997 (gallons):.....Not available  
Water Sold 1997 (gallons):.....Not available  
Unaccounted-for Water 1997 (%): .....Not available

The Glasgow Water Company withdraws water from the Barren River Reservoir, which is considered an adequate supply of raw water through 2015. They currently serve 12,270 residential customers, 1,004 commercial customers, and nine industrial customers. The water treatment plant can produce 6.0 million gallons per day. On an average day the system produces about 4.0 million gallons. The base rate for water is \$11.30 for 5,000 gallons within

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the city limits and \$17.42 for 5,000 gallons outside the city limits. The Glasgow Water Company has 42 employees, six certified water treatment plant operators and one distribution system operator.

### **GREEN RIVER VALLEY WATER DISTRICT**

The Green River Valley Water District gets its water from two primary sources, Rio Verde Spring and the Green River. Also, the Glasgow Water Company serves as a secondary source for the district. These sources are described as adequate supplies of raw water for future needs. The District currently serves 5,202 households. Services are provided in five counties: Hart, Barren, Larue, Green, and Metcalfe; and also provides water to the Mammoth Cave area. Additionally, the District sells treated water to Munfordville Water Works, Bonnieville Water Company, Larue County Water District, Green-Taylor Water District, Horse Cave and Cave City. The District operates a water treatment plant that can produce four million gallons per day. On an average day the plant produces approximately 2,692,589 gallons of water, less than 67% of its designed capacity. The District's storage system consists of 16 tanks (4,475,000 gallons of storage). The calculated charge for 5,000 gallons of treated water (residential usage) is currently \$18.80. The Green River Valley Water District has a total of 18 employees: one certified water treatment plant operator and five certified to operate the distribution system. The other employees provide billing and financial oversight.

### **PARK CITY WATER WORKS**

PWSID: ..... 0050344  
System Type: ..... COMMUNITY  
Owner Type: ..... MUNICIPAL  
Surface Source:  
Purchase Source: ..... GLASGOW WATER WORKS  
Well Source:  
Sells Water to:  
Treatment Plant Capacity (MGD): ..... 0.00  
Percent Daily Average Production: ..... 0.00  
Total Tank Storage Capacity (gallons): ..... 0.00  
Total Service Connections: ..... 257.00  
Number of Employees: ..... 1.00  
Treatment Operator Class: ..... 1D  
Distribution Operator Class:  
Customer Rate for 1,000 Gallons: ..... Not available  
O/M costs 1997: ..... Not available  
O/M costs per Service Connection: ..... Not available

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Net Revenue 1997: .....	Not available
Total Water Produced 1997 (gallons): .....	Not available
Water Sold 1997 (gallons): .....	Not available
Unaccounted-for Water 1997 (%): .....	Not available

### **CAVE CITY WATER SYSTEM**

Cave City Water System serves a population of 3,435 and has 1,041 service connections. The water district treats water from the Green River.

## **OTHER SYSTEMS**

### **DIAMOND CAVERNS RESORT & GOLF CLUB**

Diamond Caverns Resort & Golf Club serves a population of 171 and has 52 service connections. The system treats ground water from wells.

### **DIAMOND CAVERNS**

Diamond Caverns serves a population of 393 and has 89 service connections. The system has treatment capacity of 100,000 gal per day. The water source is ground water from wells.

## **PRIVATE DOMESTIC SYSTEMS**

About 4,500 people in Barren County rely on private domestic water supplies: 3,800 on wells, and 700 on other sources.

In the northern half of Barren County except in the lowlands of Beaver Creek, more than three-quarters of the drilled wells are adequate for a domestic supply. Yields as high as 50 gpm have been reported from wells penetrating large solution channels, which are a common feature in limestone rich areas such as Barren County. In the southern half of the county and along the low-lying areas along Beaver Creek, most wells are inadequate for domestic use except a few wells in lowland areas bordering streams that yield enough water for a domestic supply.

Numerous springs with flows ranging from a few gallons per minute too 2,000 gpm are found in the county. Minimum flow generally occurs in early fall, maximum flows in late winter

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